

Progress in protecting Wisconsin wetlands 2002-2003



In 2000, the Department of Natural Resources Wetland Team developed *Reversing the Loss – A Strategy for Protecting and Restoring Wetlands in Wisconsin*. The strategy charts a course for current and future agency policies and programs involved in wetland education, protection, restoration, enhancement and management. It establishes four major goals and performance measures to accomplish these goals by 2007.

DNR staff have made substantial progress in meeting some measures, but are encountering limitations to accomplishing others. Read on to learn how Wisconsin worked to "reverse the loss" in 2002 and 2003.

Reversing the Loss: Goal 1

Strengthen relationships with landowners, conservation groups, governments

More than 75 percent of Wisconsin's wetlands (more than 4 million of 5.3 million acres) are in private ownership. DNR will need to enlist wetland owners, nonprofit conservation organizations and local governments in preserving and restoring wetlands on private property while sustaining agriculture, forestry, recreation and other wetland uses including development when compatible with wetland health. An established dialogue with wetland owners, and focused outreach, education and incentives along with technical assistance, will be necessary components to make this strategy work.

A. Public Outreach

Second edition of Wetland Restoration Handbook published

Wetland owners have a new, expanded edition of the widely popular Handbook for Wetland Restoration to consult about the fundamentals of restoring wetlands. This second edition of the handbook, published by DNR's Bureau of Integrated Science Services in collaboration with the Wisconsin Wetlands Association, is now available in hard copy and online. New chapters added since the first edition include seeding and planting considerations, invasive species control, and wetland management recommendations as well as additional photographs and enhanced graphics. A print run of 3,500 of the second edition is now being distributed.

Wetlands Web pages expanded

DNR continues to update the Wetlands Web pages as new information becomes available that is of interest to private wetland owners and organizations dedicated to wetland conservation. Some of the most significant changes include the addition of a "Wetlands Mitigation" page and an "Assessment and Monitoring" page. Also, a "What's New" page updates the public on recent events, laws and new publications concerning wetlands. The Web address is: <http://dnr.wi.gov/org/water/fhp/wetlands/index.shtml>.

Educational publication offerings grow

DNR staff have continued to respond to the great demand for informational publications by developing and distributing materials both to the general public and to select groups. Examples include *Midwestern Ephemeral Wetlands*, *A Vanishing Habitat* and *Guidelines for Wetland Compensatory Mitigation in Wisconsin*.

Public Outreach

Restoration workshops draw more than 600

More than 600 people attended wetland restoration workshops conducted by the Wisconsin Wetlands Association and Wisconsin Waterfowl Association, in collaboration with DNR. These workshops, funded by a U.S. Fish & Wildlife Service grant, were geared toward Wisconsin landowners and land managers interested in restoring their own wetlands.

Participation in 2002 & 2003 Workshops

Wetland Science Forum - 377 participants

Wetland Restoration Workshops - 115 participants

Purple Loosestrife Workshops - 144 participants

Wetland Plant ID Course - 26 participants

Phragmites Workshop - 9 participants.



Wisconsin Wetlands Assn.

.More than 100 landowners and land managers learned about restoring their own wetlands in workshops conducted by DNR, Wisconsin Wetlands Association and Wisconsin Waterfowl Association.

Workshops aim to improve mitigation proposals

DNR staff in April 2003 conducted a workshop for more than 70 consultants involved in wetland regulatory work and wetland mitigation proposals whereby property owners, in some cases, would be allowed by DNR to fill in certain wetlands if their proposal to develop their land includes restoring other wetlands. With limited DNR staffing for the agency's compensatory wetland mitigation program, wetland team members believe such detailed training for consultants has noticeably improved the quality of compensatory mitigation proposals submitted to the agency.

In addition, staff have sought opportunities to present information on compensatory mitigation at industry group forums in 2002 and 2003. Such presentations have been made at three different Wisconsin Realtors Association events, the Milwaukee Builders Association, the Milwaukee Bar Association, the League of Municipalities, meetings of consulting engineers groups, and other groups.



Bio- Control Beetles

Gaining Ground

Volunteers and beetles battle invasive species

Purple loosestrife-eating beetles are gaining ground in controlling large patches of this invasive plant, which threatens to squeeze native species out of wetlands.

DNR biologists began releasing *Galerucella* beetles in 1994, after testing found them a safe, effective, natural and cheap control. Citizen cooperators, including farmers, teachers and students, Boy and Girl Scouts, service groups, and local government staff, have raised and released 95 percent of the 6-8 million beetles released on infested sites in Wisconsin.

The beetles are working well, based on anecdotes from citizen cooperators and monitoring on DNR's release sites. On those DNR sites, 80 percent have shown remarkable decreases in purple loosestrife flowering, usually followed by a drop in loosestrife plants and native plants return to dominance.



B. Technical assistance

Staff help sister agencies, private landowners avoid wetland impacts

DNR staff continue to provide technical assistance to the public and other government agency staff to improve wetland restoration, management and protection. A key activity is reviewing permit applications and working with applicants to pursue their projects in such a way to minimize the harm to wetlands. In 2002 and 2003, DNR received 588 and 458 requests, respectively, for wetland alterations and approved most of them, although often with modifications that minimized harm to the environment. Statistics below show how those requests were resolved.

Wetland Permits	Year 2002	Year 2003
Total Number of Applications	588	458
Number of Applications Approved	507	396
Acres of Approved Wetland Loss	83.27	48.52
Number of Applications Withdrawn	47	41
Number of Applications Denied	34	21

Wetland delineation training saves time and money for landowners, developers, government agencies



Training staff, consultants and the general public how to determine wetland boundaries helps protect wetlands and landowners by providing better clarity on when a permit is needed for a project, and whether a permit can be issued.

In 2002-3, DNR staff and an interagency group continued to train other DNR staff and the public in how to delineate wetlands, identify wetland plants, and assess wetland health. These wetland boundaries dictate the limits of federal, state and local jurisdiction. Good training improves consistency between agency staff and consultants, eliminating duplicative agency work and saving time and money for landowners and developers.

Regulatory workshops ease red tape, help avoid road, energy project impacts

DNR conducted a March 25, 2003, conference with the Wisconsin Department of Transportation, local road advocates and key stakeholder groups including Trout Unlimited to discuss streamlining the environmental regulatory process for those projects. Meetings have been held with various energy industry groups to develop methods and techniques for avoiding wetlands and minimizing the impacts from energy projects.

C. Incentives

Incentives for private wetland owners underway

DNR is developing a landowner's guide to property assessment and is providing information and testimony to the state Legislature on "use value assessment" legislation which has passed and resulted in wetlands to be taxed at 50 percent of assessed value. Wetland team members are currently developing a guide explaining the legislation and how it will impact the landscape. Team members also are working on a report examining other state and province tax policy and incentive programs to encourage private landowners to protect, restore and enhance wetlands. The report will include recommendations for a Wisconsin incentive program.

Reversing the Loss: Goal 2

Manage wetlands to protect species diversity, wildlife health, ecological integrity



Protecting, restoring and enhancing wetlands contributes significantly to the ecological health of other biological communities. Given their key role, wetland communities should be a focus when managing Wisconsin's biodiversity.

Wildlife that depends on water -- everything from water fleas to mink to osprey -- require adequate habitat and protection from ecosystem contaminants. Establishing a system of connected land and water features for each eco-region will help direct resources and activities to areas with the highest ecological potential.

Acquiring exceptionally high quality or scarce wetland communities and managing them to preserve a diversity of species, are key aspects of this strategy. Calcareous fens and floodplain forests, such as the hardwood floodplain forest shown here, are examples of the kinds of rare wetlands targeted.

A. Monitoring and Assessment

Cost efficient wetland assessment methods developed

The Wetland Team is developing cost effective ways to monitor wetland conditions. These complementary assessment tools range from using satellite images to map and monitor the spread of an invasive species and thus gauge wetland health, to GIS-based maps, to field surveys that produce an index of wetland health based on the prevalence of invasive plants. These tools can assess the broad array of wetland types and the health of individual wetlands as well as wetlands across larger areas. Information produced through these tools can help local and state governments and private landowners better decide how to preserve and restore wetlands. Publications describing these methods are available on the Wetland Assessment and Monitoring web page at: <http://dnr.wi.gov/org/water/fhp/wetlands/assessment>.

Frog and toad survey documents long-term population changes

DNR continued to coordinate the Wisconsin Frog and Toad Survey, which has provided important long-term data and trends on amphibian species and their habitats since 1984. Volunteers walk the same route at the same time every year to listen for frog calls. The presence or absence of each frog species at a particular site is based on the breeding calls of male frogs, with the relative number of calling individuals ranking the abundance of each species. Although changes from year to year may not be significant, long-term ones may be. For instance, the survey has documented a long-term decline in the Northern Spring Peeper.

B. Restoration and Acquisition

Wetland Reserve Program restores more than 13,000 acres in two years

The Wetland Reserve Program is a voluntary program through the USDA Natural Resources Conservation Service (NRCS) that offers landowners financial incentives and technical advice to protect, restore, and enhance wetlands on their property. DNR staff help facilitate implementation of this important wetland program, which resulted in 4,733 acres of wetlands restored in 2003 and 8,349 acres restored in 2004.

DNR Lake and River Protection Grants aid wetland conservation

Lake and river grants paid to restore, enhance and acquire wetlands; \$10,000 each went to enhance Mud Lake wetlands in Jefferson County, to restore the Yahara River wetlands in Dane County and to re-vegetate the English Lake wetland detention basin re-vegetation in Manitowoc County. An additional \$2,095,286 was disbursed for other wetland-related, acquisition or shoreland projects.

Reversing the Loss: Goal 3

Streamline our regulatory approach for permits, restoration activities

Because Wisconsin's regulatory and enforcement program for wetlands is based primarily upon federal laws and regulations, several state and federal agencies are typically involved in every permitting decision. That system often leads to inefficient, inconsistent decision-making, which frustrates wetland owners and doesn't sufficiently protect wetlands. DNR can improve the process by identifying and removing barriers to efficient and effective decision-making. The agency also can eliminate duplication and provide consistency by establishing a state wetland protection program that supersedes federal regulation and oversight. New legislation authorizing compensatory mitigation and providing state enforcement authority is a necessary part of this regulatory approach. The department can encourage local officials and development interests to avoid wetlands or incorporate them into their project as a site amenity, reducing the need for wetland permits.

A. Streamline regulatory approach for permits and restoration activities

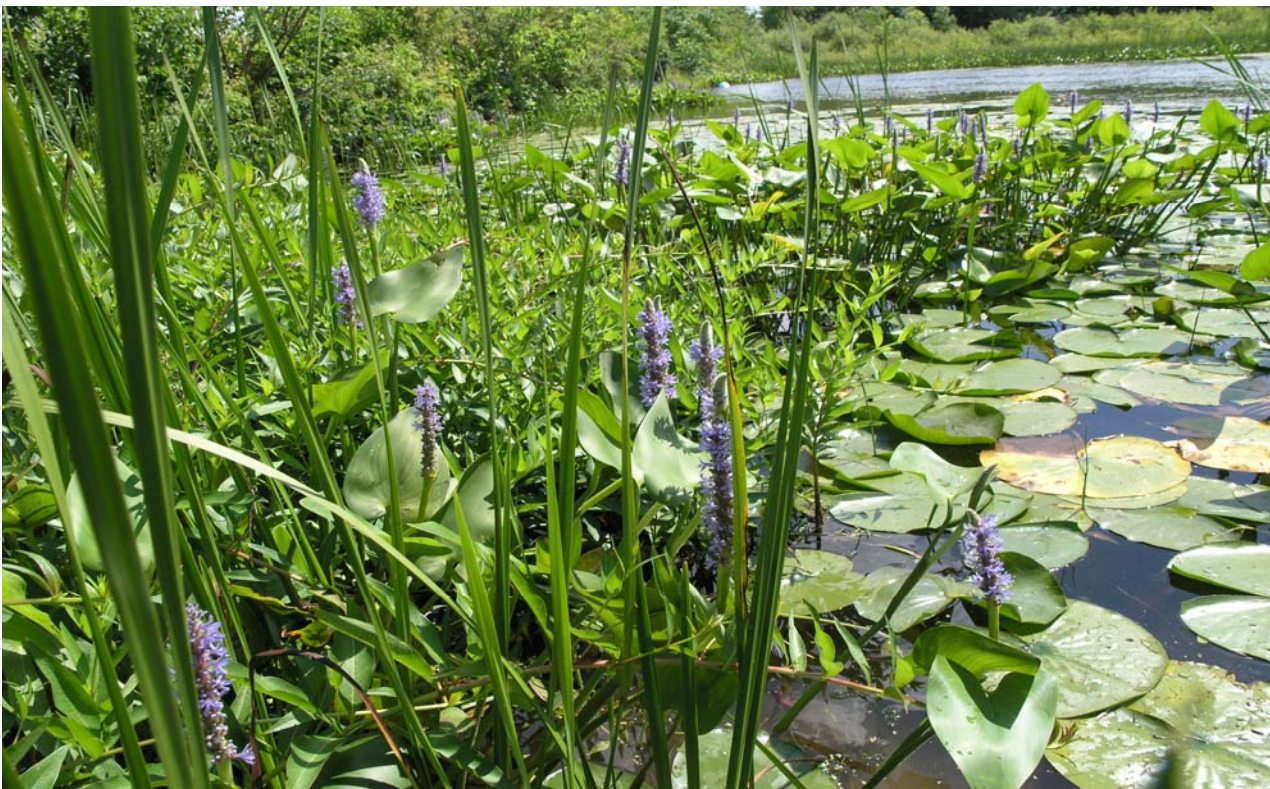
Rule streamlines review process for restoration projects

In an effort to increase wetland conservation activities, a new administrative rule DNR developed to expedite the review and approval for wetland restoration projects went into effect Feb. 1, 2003. This new rule establishes a streamlined process for regulated activities associated with restoring former wetlands, enhancing degraded wetlands and maintaining or managing existing wetlands.

B. Wetland Compensatory Mitigation

Wetland Compensatory Mitigation policies enacted

Administrative rules effective February 2002 carry out a wetland compensatory mitigation program that can -- in some cases -- allow landowners to fill in certain wetlands if their proposal to develop their land includes restoring other wetlands. The rules set standards for development, monitoring and long-term maintenance of wetland compensatory mitigation projects are approved by DNR, and establish procedures and standards for establishing and maintaining mitigation banks. So far the rules appear to be working as intended: neither review times nor permitted wetland losses have increased under the program. Furthermore, DNR, the U.S Army Corps of Engineers, EPA and the U.S. Fish & Wildlife Service have formally adopted DNR's guidance document to make decisions between agencies consistent across the state.



Reversing the Loss: Goal 4

Develop and use new technology to map, monitor, protect and manage wetlands

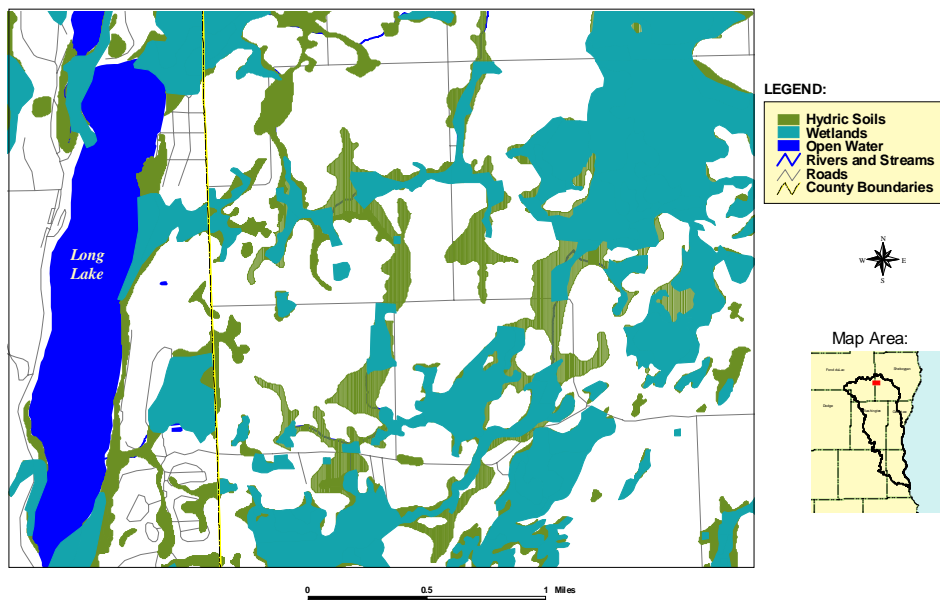
Giving the public and staff a common, up-to-date source of wetland information to use in making decisions is essential for the success of other strategies contained in "Reversing the Loss." An integral component of wetland information is the Wisconsin Wetland Inventory, which consists of more than 1,700 maps showing wetland locations and types. Because of staff shortages, the maps are only updated every 24 years. The time between updates needs to be shortened significantly to make the maps more useful. Making the wetland inventory available for planning and managing wetlands, in addition to its current use in regulating wetlands, is crucial to the success of this strategy, as is developing a unified tracking and reporting system.

Much progress has been made and will continue to be made developing new strategies for wetland monitoring due to support through EPA's State Development Grant Program. New assessment methodologies are described under Reversing the Loss: Goal 2.

Digitizing wetland photos for easy access, better decision making

The Wisconsin Wetland Inventory continues to improve its new methodology for creating digital aerial photos free of distortion. The goal is to eventually have complete statewide coverage available for downloading from the Internet. Federal funding from EPA allows DNR to hire limited term staff to hasten the digital mapping process for watershed wetland assessment projects in the Lower Chippewa Basin and the Milwaukee River Basin. Updating wetland inventory maps helps landowners and government agency officials identify wetlands and plan how to better protect them.

Example: Potentially Restorable Wetlands
Kettle Moraine Area



GIS technology to aid wetland decisionmaking

Overlaying the Wisconsin Wetland Inventory with soil surveys allows us to identify areas that could support restored wetlands. This map shows a preliminary step in the process of integrating information about water, soils, and other conditions on the ground and displaying it visually. Such tools can help government and private landowners make better informed decisions about where to restore wetlands.



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